

1. An aqueous fire barrier composition comprising:  
latex comprising a polymer;  
a polyol having 2, 3 or 4 hydroxy groups and a molecular weight of  
from about 75 to about 1200; and  
an intumescent agent.

2. The composition of claim 1, wherein said polyol is selected from the group consisting of polyethylene glycol, polypropylene glycol and combinations thereof.

3. The composition of claim 1, wherein said composition comprises from about 1 % by weight to about 10 % by weight polyol.

4. The composition of claim 1, wherein said composition comprises from about 1 % by weight to about 5 % by weight polyol.

5. The composition of claim 1, wherein said composition comprises from about 1 % by weight to about 3 % by weight polyol.

6. The composition of claim 1, wherein said polymer is selected from the group consisting of acrylate, methacrylate, vinyl acetate and combinations thereof.

7. The composition of claim 1, wherein said polymer comprises acrylate-vinylacetate-ethylene terpolymer.

8. The composition of claim 1, wherein said polymer is selected from the group consisting of rubber, styrene butadiene copolymer, butadiene acrylonitrile copolymer, polyisoprene, polybutadiene and combinations thereof.

9. The composition of claim 1, wherein said composition has a caulk rate of at least about 100 g/min at room temperature.

10. The composition of claim 1, wherein said composition has a caulk rate of at least about 150 g/min at room temperature.

5 11. The composition of claim 1, wherein said composition after aging for two weeks at room temperature has a caulk rate of at least about 200 g/min.

12. The composition of claim 1, wherein said composition after aging for two weeks at 50°C has a caulk rate of at least about 20 g/min.

10 13. The composition of claim 1, wherein said composition exhibits a slump resistance of no greater than 8 mm.

14. The composition of claim 1, wherein said composition passes the One Hour Fire Test.

15 15. The composition of claim 1, wherein said composition passes the Two Hour Fire Test.

20 16. The composition of claim 1, wherein said composition passes the Three Hour Fire Test.

17. The composition of claim 1, wherein said composition passes the Hose Stream Test after a one hour burn.

25 18. The composition of claim 1, wherein said composition passes the Hose Stream Test after a two hour burn.

30 19. The composition of claim 1, wherein said composition passes the Hose Stream Test after a three hour burn.

20. The composition of claim 1, further comprising a fire retardant agent.

21. The composition of claim 20, wherein said fire retardant agent is selected from the group consisting of phosphorous, glass, boron, metal oxide, metal hydrate, and combinations thereof.

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22. The composition of claim 20, wherein said fire retardant agent is selected from the group consisting of aluminum oxide trihydrate, zinc borate and mixtures thereof.

23. The composition of claim 1, wherein said polyol has a molecular weight of  
10 from about 100 to about 500.

24. The composition of claim 1, wherein said intumescent agent comprises a composition comprising

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granular alkali metal silicate represented by the formula  
 $M_2O:XSiO_2$  in which M is an alkali metal,  
at least one oxyboron compound selected from the group consisting  
of boric acid and borate salts of Group I and group II elements, and  
water bound to said alkali metal silicate,  
the weight ratio X ranging from about 1.5 to about 4,  
20 the molar ratio of boron to M being from about 0.2 to about 0.9,  
and the water being from about 5 % to about 15 % of the total  
granule weight.

25. The composition of claim 1 comprising:  
25 from about 25 % by weight to about 75 % by weight latex;  
from about 1 % by weight to about 10 % by weight polyol; and  
from about 2 % by weight to about 40 % by weight intumescent  
agent.

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26. An aqueous fire barrier composition comprising:  
latex comprising a polymer;

a polyol having 2, 3 or 4 hydroxy groups; and  
an intumescent agent comprising a composition comprising  
granular alkali metal silicate represented by the formula  
 $M_2O:XSiO_2$  in which M is an alkali metal,

at least one oxyboron compound selected from the group  
consisting of boric acid and borate salts of Group I and group II  
elements, and

water bound to said alkali metal silicate,

the weight ratio X ranging from about 1.5 to about 4,

the molar ratio of boron to M being from about 0.2 to about  
0.9,

and the water being about 5 % to about 15 % of the total  
granule weight.

27. The composition of claim 26, wherein said polyol is selected from the  
group consisting of ethylene glycol, propylene glycol, polyethylene glycol, polypropylene  
glycol, glycerol and combinations thereof.

28. The composition of claim 26, wherein said composition comprises from  
about 1 % by weight to about 10 % by weight polyol.

29. The composition of claim 26, wherein said composition comprises from  
about 1 % by weight to about 5 % by weight polyol.

30. The composition of claim 26, wherein said composition comprises from  
about 1 % by weight to about 3 % by weight polyol.

31. The composition of claim 26, wherein said polymer comprises acrylate-  
vinylacetate-ethylene terpolymer.

32. The composition of claim 26, further comprising a fire retardant agent.

33. The composition of claim 32, wherein said fire retardant compound is selected from the group consisting of phosphorous, glass, boron, metal oxide, metal hydrate, and combinations thereof.

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34. The composition of claim 32, wherein said fire retardant agent is endothermic.

35. The composition of claim 32, wherein said fire retardant agent is selected from the group consisting of aluminum oxide trihydrate, zinc borate and mixtures thereof.

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36. The composition of claim 26, wherein said composition exhibits a caulk rate of at least about 100 g/min at room temperature.

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37. The composition of claim 26, wherein said composition exhibits a caulk rate of at least about 150 g/min at room temperature.

35. The composition of claim 26, wherein said composition after aging for two weeks at room temperature exhibits a caulk rate of at least about 200 g/min.

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36. The composition of claim 26, wherein said composition after aging for two weeks at 50°C has a caulk rate of at least about 20 g/min.

37. The composition of claim 26, wherein said composition exhibits a slump resistance of no greater than 8 mm.

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38. The composition of claim 26, wherein said composition passes the One Hour Fire Test.

39. The composition of claim 26, wherein said composition passes the Two Hour Fire Test.

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40. The composition of claim 26, wherein said composition passes the Three Hour Fire Test.

5 41. The composition of claim 26, wherein said composition passes the Hose Stream Test after a one hour burn.

42. The composition of claim 26, wherein said composition passes the Hose Stream Test after a two hour burn.

10 43. The composition of claim 26, wherein said composition passes the Hose Stream Test after a three hour burn.

15 44. The composition of claim 26, wherein said polymer is selected from the group consisting of acrylate, methacrylate, vinyl acetate and combinations thereof.

45. The composition of claim 26, wherein said polymer comprises acrylate-vinylacetate-ethylene terpolymer.

20 46. The composition of claim 26, wherein said polymer is selected from the group consisting of rubber, styrene butadiene copolymer, butadiene acrylonitrile copolymer, polyisoprene, polybutadiene and combinations thereof.

25 47. An aqueous fire-barrier composition comprising:  
latex comprising acrylate-vinylacetate-ethylene terpolymer;  
a polyol having 2, 3 or 4 hydroxy groups; and  
an intumescent agent.

30 48. An aqueous fire barrier composition comprising:  
a) 40 % by weight to 45 % by weight latex comprising acrylate-vinylacetate-ethylene terpolymer;

- b) 1 % by weight to 3 % by weight polyethylene glycol having a molecular weight from about 100 to about 500;
- c) 15 % by weight to 25 % by weight intumescent agent comprising a composition comprising

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granular alkali metal silicate represented by the formula  $M_2O:XSiO_2$  in which M is an alkali metal,

at least one oxyboron compound selected from the group consisting of boric acid and borate salts of Group I and group II elements, and

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water bound to said alkali metal silicate,

the weight ratio X ranging from about 1.5 to about 4,

the molar ratio of boron to M being from about 0.2 to about 0.9,

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and the water being about 5% to about 15% of the total granule weight; and

- d) 18 % by weight to 27 % by weight zinc borate.

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